

Remarks

I. Claim Amendments

Claims 3-14, 16 and 19 are currently pending. Claims 3 and 5-8 have been amended to indicate that the salt is added in step a), b), or c), and that the quaternary ammonium salt is selected from the group consisting of benzyltrimethylammonium hydroxide, benzyltrimethylammonium chloride and benzyltrimethylammonium carbonate, the phosphonium salt is tetrabutylphosphonium bromide and the sulfonium salt is triethylsulfonium tetrafluoroborate. Support for this amendment can be found in original claim 11. Claims 9-11 have been canceled. Claims 12 and 19 have been amended to change the spelling of the word “synthesising” to the standard American spelling “synthesizing.”

No new matter has been added by these amendments.

II. Arguments

A. Claim Objections

Claim 19 has been amended to correct the spelling of “synthesising” to “synthesizing.” Applicants respectfully request the withdrawal of this objection.

B. Claim Rejections, §112, second paragraph

The Office has rejected claim 12 as being indefinite. Claim 12 has been amended to clarify that the addition of the salt occurs in step a, b or c. The Applicants believe that this rejection has been rendered moot by the amendments made herein.

C. Claim Rejections §102(b)

i. Hudson

The Office has rejected claims 3-4, 7, 12-14, 16 and 19 as being anticipated by Hudson (US 4,888,385). The Office has asserted that Hudson teaches the use of BOP during solid phase peptide synthesis. BOP is a commonly known coupling agent, and Hudson teaches its use as a coupling agent, for use in a coupling step during solid phase synthesis.

Applicants respectfully argue that Hudson does not teach the use of any other salt, specifically benzyltrimethylammonium hydroxide, benzyltrimethylammonium chloride, benzyltrimethylammonium carbonate, tetrabutylphosphonium bromide, or triethylsulfonium tetrafluoroborate. In light of the amendments made to claims 3---, Applicants believe that Hudson does not anticipate the presently amended claims, and therefore respectfully request the withdrawal of the rejection.

ii. Birr

The Office has rejected claims 3-4, 9-12, and 16 as being anticipated by Birr (US 4,290,943). The Office has asserted that Birr teaches the use of benzyltrimethylammonium hydroxide to cleave peptide fragments from the solid support.

Applicants respectfully argue that Birr does not teach the use of any other salt, nor does Birr teach the use of a salt in the deprotecting, wash, or cleavage steps (steps a, b and c respectively) outlined in claims 3, 4, 9-12, and 16. Therefore, Applicants respectfully contend that Birr does not anticipate the presently presented claims.

D. Claim Rejections §103(a) - Mihala & Thaler

The Office has rejected claims 5, 6 and 8 as being unpatentable over Mihala (J. Peptide Science, 7:565-568 (2001)) and Thaler (Helvetica Chimica Acta v 74 1991 p.628-643). The Office has asserted that Mihala teaches the use of TBA*ODhbt, a tetrabutyl ammonium salt, to enhance solubility during solid phase peptide synthesis. The Office has asserted that Thaler teaches the use of salts can increase resin swelling and improve coupling yields.

Applicants respectfully contend that Mihala does not disclose the use of quaternary ammonium salts, phosphonium salts, or sulfonium salts as claimed in currently amended claims 5, 6 or 8, nor does Mihala suggest that any salt other than TBA*ODhbt would be effective for the purposes described in Mihala.

Furthermore, as discussed in the prior office action response, Applicants respectfully contend that Thaler teaches the use of metallic salts (Li-salts, and KSCN). Thaler does not suggest that any other salt would be effective, particularly nonmetal salts, and even more particularly ammonium, phosphonium, or sulfonium salts.

Therefore, in light of the amendments to the claims presented herein, Applicants believe that this rejection has been overcome.

III. Conclusion

Applicants submit that the rejections proffered by the Office have been overcome, and that the Application is now in condition for allowance. The Applicants invite the Examiner to contact the undersigned as indicated below if the Examiner believes that this would expedite prosecution of this application.

Respectfully submitted,

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